



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,870	11/26/2003	Marc Alan Strand	80063	8649

40850 7590 10/01/2004
ERIC D. MIDDLEMAS
EASTMAN CHEMICAL COMPANY
P. O. BOX 511
KINGSPORT, TN 37662-5075

EXAMINER

BOYKIN, TERRESSA M

ART UNIT	PAPER NUMBER
----------	--------------

1711

DATE MAILED: 10/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/722,870	Applicant(s) STRAND ET AL. CP	
	Examiner Terressa M. Boykin	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5-24-04</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-15,17-28, 32-33 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6068910 ,See abstract, cols.1-5 examples and FIG. 2A FIG. 2B as well as claims 1-10.

With regard to claims 1 and 33, note that US 6068910 discloses a polyester resin composition is calendered to produce a film or a sheet. The polyester resin composition is a polyester having a crystallization half time from a molten state of at least 5 minutes combined with an additive for preventing sticking of the polyester to calendering rolls. Polyesters useful in the practice of this invention include polyesters having a crystallization half time from a molten state of at least about 5 minutes, preferably about 12 minutes (note applicants claim 10). Note that the reference states that the term "polyesters" as used herein is meant to include copolyesters. Amorphous polyesters are preferred because of their having a crystallization half time of infinity. Desired crystallization kinetics from the melt may also be achieved by adding polymeric additives or by altering the molecular weight characteristics of the polymer. An especially useful technique is to blend amorphous or very slow crystallizing polyester with the base polyester.

The reference discloses that the method of calendering is an economic and highly efficient means to produce film and sheet from plastics such as plasticized and rigid poly (vinyl chloride) (PVC) compositions. The films and sheets usually have a thickness ranging from about 2 mils (0.05 mm) to about 45 mils (1.14 mm). They are readily thermoformed into various shapes and are used for a wide variety of packaging applications. Calendered PVC film or sheet can be used in a wide range of applications including pool liners, graphic arts, transaction cards, security cards, veneers, wall coverings, book bindings, folders, floor tiles and products which are printed or decorated or laminated in a secondary operation. The components listed in the table are as follows. TPA: terephthalic acid IPA: isophthalic acid NDCA: naphthalenedicarboxylic acid EG: ethylene glycol BPAE: ethylene oxide adduct of bisphenol A CHDM: cyclohexanedimethanol DEG: diethylene glycol

With regard to the diacids and diols as disclosed in applicants' claims 2 and 32 as well as the mole percents as disclosed in applicants' claims 3, 4, 5 and 6 note that the reference states that preferred polyesters comprise (i) at least 80 mole percent of a diacid residue component selected from terephthalic acid, naphthalenedicarboxylic acid, 1,4-cyclohexanedicarboxylic acid, isophthalic acid or mixtures thereof and (ii) at least 80 mole percent of a diol residue component selected from diols containing 2 to about 10 carbon atoms and mixtures thereof. The diacid residue component is based on 100 mole percent, and the diol residue component is based on 100 mole percent. For the diacid residue component, any of the various isomers of naphthalenedicarboxylic acid or mixtures of isomers may be used, but the 1,4, 1,5-, 2,6-, and 2,7-isomers are preferred. Also, cis, trans, or cis/trans isomer mixtures of 1,4-cyclohexanedicarboxylic acid may be used. Sulfoisophthalic acid may also be

Art Unit: 1711

used. The diacid residue component may be modified with minor amounts of up to about 20 mole percent of other diacids containing about 4 to about 40 carbon atoms and include succinic acid, glutaric acid, azelaic acid, adipic acid, suberic acid, sebacic acid, dimer acid and the like. For the diol residue component, the preferred diols include ethylene glycol, diethylene glycol, neopentyl glycol, 1,4-cyclohexanedimethanol and mixtures thereof. More preferably, the diol residue component is from about 10 to 100 mole percent 1,4-cyclohexanedimethanol and from about 90 to 0 mole percent ethylene glycol. The diol residue component may also be modified with up to about 20 mole percent of other diols. Suitable modifying diols include 1,3-propanediol, 1,4-butanediol, 1,5-pentanediol, 1,6-hexanediol, 1,8-octanediol, 2,2,4-trimethyl-1,3-pentanediol, propylene glycol, 2,2,4,4-tetramethyl-1,3-cyclobutanediol and the like.

With regard to claims 7, 8, 9, 12, 13 and 14 note that in addition to the composition as described above, additives suitable for use in the reference are well known in the calendering art and include internal lubricants, slip agents or mixtures thereof. Examples of such additives include fatty acid amides such as erucylamide and stearamide; metal salts of organic acids such as calcium stearate and zinc stearate; fatty acids and esters such as stearic acid, oleic acid, and palmitic acid; hydrocarbon waxes such as paraffin wax, polyethylene waxes, and polypropylene waxes; chemically modified polyolefin waxes; ester waxes such as carnauba; glycerol mono- and di-stearates; talc; and acrylic copolymers.

With regard to applicants' claim 18, note that the reference states that in a typical calendering process line, the plastic resin is blended with specific ingredients such as stabilizers to prevent thermal degradation; modifiers for clarity, heat stability or opacity characteristics; pigments; lubricants and

Art Unit: 1711

processing aids; anti-static agents; UV inhibitors; and *flame retardants*.

Further, with regard to both claims 17, 18 and 26, 28 in addition to the additives described above, other additives typically used with polymers may be used as desired. These include plasticizers, dyes, colorants, pigments, fillers, matting agents, antiblocking agents, antistatic agents, chopped fibers, glass, impact modifiers, flame retardants, carbon black, talc, TiO₂ and the like.

With regard to claims 19 and 20 note that the reference discloses that the inherent viscosity (I.V.) of useful polyesters generally range from about 0.4 to about 1.5 dL/g, preferably about 0.6 to about 12 dL/g. I.V. as used herein refers to inherent viscosity determinations made at 25.degree. C. using 0.25 gram of polymer per 100 mL of a solvent composed of 60 weight percent phenol and 40 weight percent tetrachloroethane. See also description of composition as noted above with regard to applicants dependent claims 21,22, 23 and 24.

Thus, there appears to be no significant difference between the reference and that which is claimed by applicant(s). Any differences not specifically mentioned appear to be conventional. Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

35 USC 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at

Art Unit: 1711

the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16, 29, are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 001138260 see abstract, claims.

With regard to applicant's claims 16 and 29, the reference discloses the claimed invention except for the particular plasticizer as claimed.

However, JP 001138260 discloses a crystalline thermoplastic polyester resin (A), for example, polyethylene terephthalate or a copolymer having at least 80mol% ethylene terephthalate repeating units is mixed with 1-100 parts by weight of polyolefin (B) containing 0.01-20 weight % polar groups such as carboxyl, carboxylic acid anhydride or epoxy groups and having an intrinsic viscosity of 0.05 – 30%dl/g, 0.01 parts by weight of amine compound (C) having at least one primary or secondary amino group in the molecule, and organic acid and 0.01 –20 parts by weight of a plasticizer (E) such as diethylene glycol dibenzoate, and the obtained mixture is melt-kneaded.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the plasticizer as disclosed since such plasticizer is disclosed as displaying superior characteristics for the polyester polymer as made. See page 5 lower right column.

Claims 30, 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 5679288 see abstract, claim 2, cols. 1-4.

With regard to claims 30 and 31 the reference discloses the claimed invention except for the particular flame retardant as claimed. Note that USP 5679288 discloses the use of resorcinol bis(diphenyl phosphate as a preferred flame

Art Unit: 1711

retardant for the polyesters disclosed.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the particular flame retardant of the reference since such specific flame retardant is disclosed as imparting superior properties for polyesters as disclosed. See claim 2, cols. 1-4.

Obviousness Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 2, 3, 4, 9, and 12 are rejected under the judicially created doctrine of double patenting over claims 1, 2, 3, 4, 7, 8, 9, 10, 11 – 20 of U. S. Patent No. **6551688** since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows:

Art Unit: 1711

USP 6551688 discloses in claim 1 calendered film or sheet having a haze value of less than 5 percent as measured according to ASTM D1003 and comprising a polyester resin composition comprising: (a) a polyester having a crystallization half-time from a molten state of at least 5 minutes, (b) an additive comprising (i) a fatty acid or a salt of a fatty acid containing more than 18 carbon atoms and (ii) an ester wax comprising a fatty acid containing more than 18 carbon atoms with an alcohol containing from 2 to 28 carbon atoms, wherein the ratio of the fatty acid or salt of the fatty acid to the ester wax is 1:1 or greater, which is obvious over applicants' claims 1.

Claim 2 of the reference is obvious over applicants claim 10

Claim 3 of the reference is obvious over applicants' present claims 2, 3, 4.

Claim 4 of the reference is obvious over applicants' claim 12.

Claims 7, 8, 9, 10, 11–20 of the reference are obvious over applicants' claim 9.

****Note that in claim 33 the recited "25-31" should be written out in complete form showing all claims dependent thereon.***

Correspondence

Please note that the cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site (www.uspto.gov), from the Office of Public Records and from commercial sources. Applicants may be referred to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Terressa Boykin whose telephone

Art Unit: 1711

number is 571 272-1069. The examiner can normally be reached on Monday through Friday from 6:30am to 3:00pm.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. The general information number for listings of personnel is (**571-272-1700**).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tmb



Examiner Terressa Boykin
Primary Examiner
Art Unit 1711